

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 1-54, 56, 58, 60-68, 71 and 73-79, amend claims 55 and 69, and add new claims 90-121 as follows:

Listing of Claims:

1-54. (Cancelled)

55. (Currently Amended) A method of manufacturing a polishing pad for planarization of a microelectronic-device substrate assembly, comprising:

depositing a plurality of pattern elements over a first surface of a polymeric backing member, each pattern element directly contacting the first surface and having a portion projecting away from the first surface of the backing member;

forming a plurality of contour surfaces over a first surface of a polymeric backing member to project away from the first surface, the portions of the pattern elements projecting away from the backing member defining the contour surfaces; and

covering the contour surfaces with a hard cover layer of a hard, rigid non-polymeric comprising a material selected from the group consisting of: silica nitride, ceria, silica, alumina, titanic nitride, titania, titanium, zirconia, a nitride and a ceramic, that contacts portions of the first surface of the backing member and conforms to the contour surfaces to form nodules from the portions of the hard cover layer over the contour surfaces, the nodules projecting away from the first surface of the backing member.

56. (Cancelled)

57. (Previously Presented) The method of claim 55 wherein depositing a plurality of pattern elements over the first surface comprises coating the first surface with a liquid containing the pattern elements and evaporating the liquid to leave the pattern elements directly on the first surface of the backing member.

58. (Cancelled)

59. (Original) The method of claim 57 wherein coating the first surface with the liquid containing the pattern elements comprises spraying the first surface of the backing member with a solution including the liquid and the pattern elements.

60-68. (Cancelled)

69. (Currently Amended) A method of manufacturing a polishing pad for planarization of a microelectronic-device substrate assembly, comprising:

distributing a plurality of pattern elements over a first surface of a polymeric backing member, the pattern elements directly contacting the first surface and further defining a plurality of contour surfaces projecting away from the first surface of the backing member; and

forming a layer of a hard ~~and rigid non-polymeric~~ material on the pattern elements to conform to the contour surfaces, the layer of ~~hard, rigid non-polymeric~~ hard material comprising a material selected from the group consisting of: silica nitride, ceria, silica, alumina, titanic nitride, titania, titanium, zirconia, a nitride and a ceramic, also contacting at least a portion of the polymeric backing member, wherein the portions of the cover layer over the contour surfaces project away from the first surface of the backing member to define abrasive nodules.

70. (Original) The method of claim 69 wherein distributing a plurality of pattern elements over the first surface comprises coating the first surface with a liquid containing the pattern elements and evaporating the liquid to leave the pattern elements directly on the first surface of the backing member.

71. (Cancelled)

72. (Original) The method of claim 70 wherein coating the first surface with the liquid containing the pattern elements comprises spraying the first surface of the backing member with a solution including the liquid and the pattern elements.

73-79. (Cancelled)

80. (Withdrawn) A method of planarizing a microelectronic-device substrate assembly, comprising:

pressing a surface of the substrate assembly against a polishing pad including a backing member having a first surface and a second surface, a plurality of pattern elements distributed over the first surface of the backing member to define a plurality of contour surfaces projecting away from the first surface of the backing member, and a hard cover layer over the pattern elements and over portions of the first surface of the backing member exposed between pattern elements, the cover layer at least substantially conforming to the contour surfaces of the pattern elements to form a plurality of hard nodules projecting away from the first surface of the backing member, the nodules defining at least a portion of a planarizing surface of the polishing pad for engaging a microelectronic-device substrate assembly held by a substrate holder; and

moving at least one of the substrate assembly or the polishing pad to translate the surface of the substrate assembly across at least a portion of the hard nodules.

81. (Withdrawn) A method of planarizing a microelectronic-device substrate assembly, comprising:

pressing a surface of the substrate assembly against a polishing pad including a base section having a first surface, a plurality of contour surfaces above the first surface, and a second surface configured to be placed over a support table of a planarizing machine, and the polishing pad further including a plurality of abrasive elements projecting away from the base section to define at least a portion of a planarizing surface for engaging a microelectronic-device substrate assembly held by a substrate holder, the abrasive elements including raised portions of a hard cover layer over the contour surfaces that project away from the base section; and

moving at least one of the substrate assembly or the polishing pad to translate the surface of the substrate assembly across at least a portion of the abrasive elements.

82. (Withdrawn) A polishing pad manufactured according to a method comprising:

forming a plurality of contour surfaces over a first surface of a backing member to project away from the first surface; and

covering the contour surfaces with a cover layer of hard material that at least substantially conforms to the contour surfaces and to portions of the first surface of the backing member exposed between pattern elements to form nodules from the portions of the hard cover layer over the contour surfaces, the nodules projecting away from the first surface of the backing member.

83. (Withdrawn) A polishing pad manufactured according to a method, comprising:

distributing a plurality of pattern elements over a first surface of a backing member, the pattern elements defining a plurality of contour surfaces projecting away from the first surface of the backing member; and

forming a layer of a hard material on at least the pattern elements to at least substantially conform to the contour surfaces, the portions of the cover layer over the contour surfaces projecting away from the first surface of the backing member to define abrasive nodules.

84. (Previously Presented) The method of claim 55, wherein forming a plurality of contour surfaces over a first surface of a polymeric backing member includes forming the plurality contour surfaces on a compressible polymeric backing member.

85. (Previously Presented) The method of claim 55, wherein forming a plurality of contour surfaces over a first surface of a polymeric backing member includes forming the plurality contour surfaces on an incompressible polymeric backing member comprised of a cured resin.

86. (Previously Presented) The method of claim 55, wherein forming a plurality of contour surfaces over a first surface of a polymeric backing member includes forming the plurality contour surfaces on a backing member comprised of a cured resin.

87. (Previously Presented) The method of claim 69, wherein distributing a plurality of pattern elements over a first surface of a polymeric backing member includes distributing the plurality of pattern elements on a compressible polymeric backing member.

88. (Previously Presented) The method of claim 69, wherein distributing a plurality of pattern elements over a first surface of a polymeric backing member includes distributing the plurality of pattern elements on an incompressible polymeric backing member comprised of a cured resin.

89. (Previously Presented) The method of claim 69, wherein distributing a plurality of pattern elements over a first surface of a polymeric backing member includes distributing the plurality of pattern elements on a backing member comprised of a cured resin.

Please add the following new claims:

90. (New) The method of claim 55 wherein the hard cover layer is comprised of silica nitride.

91. (New) The method of claim 55 wherein the hard cover layer is comprised of ceria.

92. (New) The method of claim 55 wherein the hard cover layer is comprised of silica.

93. (New) The method of claim 55 wherein the hard cover layer is comprised of alumina.

94. (New) The method of claim 55 wherein the hard cover layer is comprised of titanic nitride.
95. (New) The method of claim 55 wherein the hard cover layer is comprised of titania.
96. (New) The method of claim 55 wherein the hard cover layer is comprised of titanium.
97. (New) The method of claim 55 wherein the hard cover layer is comprised of zirconia.
98. (New) The method of claim 55 wherein the hard cover layer is comprised of a nitride
99. (New) The method of claim 55 wherein the hard cover layer is comprised of a ceramic.
100. (New) The method of claim 69 wherein the hard cover layer is comprised of silica nitride.
101. (New) The method of claim 69 wherein the hard cover layer is comprised of ceria.
102. (New) The method of claim 69 wherein the hard cover layer is comprised of silica.
103. (New) The method of claim 69 wherein the hard cover layer is comprised of alumina.

104. (New) The method of claim 69 wherein the hard cover layer is comprised of titanic nitride.

105. (New) The method of claim 69 wherein the hard cover layer is comprised of titania.

106. (New) The method of claim 69 wherein the hard cover layer is comprised of titanium.

107. (New) The method of claim 69 wherein the hard cover layer is comprised of zirconia.

108. (New) The method of claim 69 wherein the hard cover layer is comprised of a nitride

109. (New) The method of claim 69 wherein the hard cover layer is comprised of a ceramic.

110. (New) A method of manufacturing a polishing pad for planarization of a microelectronic-device substrate assembly, comprising:

depositing an intermediate layer of material over a first layer of a polymeric material,

depositing a plurality of pattern elements over an upper surface of the intermediate layer, each pattern element directly contacting the upper surface of the intermediate layer and having a portion projecting away from the first layer of the polymeric material thereby forming a contour surface projecting away from the intermediate layer; and

covering the contour surfaces with a hard cover layer comprising a material selected from the group consisting of: silica nitride, ceria, silica, alumina, titanic nitride, titania, titanium, zirconia, a nitride and a ceramic, that contacts portions of the upper surface of the intermediate layer and conforms to the contour surfaces to form nodules from the portions of the

hard cover layer over the contour surfaces, the nodules projecting away from the upper surface of the intermediate layer and the first layer of polymeric material.

111. (New) The method of claim 110 wherein the intermediate layer is comprised of a material selected from the group consisting of: silica nitride, ceria, silica, alumina, titania, titanium nitride, a ceramic material or a metallic material.

112. (New) The method of claim 111. wherein the intermediate layer is comprised of silica nitride.

113. (New) The method of claim 111. wherein the intermediate layer is comprised of ceria.

114. (New) The method of claim 111. wherein the intermediate layer is comprised of silica.

115. (New) The method of claim 111. wherein the intermediate layer is comprised of alumina.

116. (New) The method of claim 111. wherein the intermediate layer is comprised of titanium nitride.

117. (New) The method of claim 111. wherein the intermediate layer is comprised of titania.

118. (New) The method of claim 111. wherein the intermediate layer is comprised of titanium.

119. (New) The method of claim 111. wherein the intermediate layer is comprised of zirconia.

120. (New) The method of claim 111, wherein the intermediate layer is a metallic layer.

121. (New) The method of claim 111, wherein the intermediate layer is a ceramic layer.